Technical Assistance for Public Water Systems

The Idaho DrinkingWater Newsletter

Department of Environmental Quality Idaho Drinking Water Program

December 2005, Number 38

Effective November 17, 2005

DEQ Board adopts Point-of-Use Rule

What is point-of-use (POU)? A point-of-use device is a self-contained drinking water treatment unit that is applied to a single tap, typically under a kitchen sink to reduce contaminants at that location.

What does the adopted POU Rule do? At the November 16th DEQ Board meeting, the Board adopted the POU Rule (effective as of November 17, 2005) to allow small public drinking water systems the flexibility of using POU treatment technology for treating some chemical contaminants such as arsenic.

Implementing a POU treatment strategy may be less expensive than building, expanding, or upgrading a central treatment plant.

The adopted rule exempts small public drinking water systems from the requirements, in Idaho Code §39-118, of submitting engineering plan and specifications if they serve less than 200 service connections. The rule exempts systems from submitting documentation of their technical and managerial capabilities to the Department.

Pictured above: an under-sink POU.

In addition, the rule also allows public drinking water systems serving over 200 service connections the option of applying to the state for a waiver of the engineering plan and specification requirements.

The Department expects the POU Rule will have a cost savings for systems because they will not be required to submit plans and specifications for DEQ approval.

Getting approval to use POU. The new rule identifies what is required for a public water system to get approval from the Department. A system wanting to use POU devices will have to demonstrate to the Department how they will ensure the protection of public health through long-term maintenance and management of these devices.

DEQ will present the adopted rule to the 2006 State Legislature for approval.

Where can I find a copy of the rule? You can find a copy of the POU rule on DEQ's web site at http://www.deq.idaho.gov/rules/deq_rulemaking.cfm. ■

Final of a three-part series

Coliform sampling: protecting against pathogens

This article will wrap up the series on coliform sampling. We will revisit the key points offered in the first two articles, then discuss how the coliform samples are used to protect public health.

The first article described the importance of correctly filling out the sample submittal form in order to avoid errors and ensure that any follow-up that might be required is targeted at the right location.

Taking a coliform sample creates a legal record that is used to determine a water system's compliance with the Total Coliform Rule (TCR).

Carrying out this task in a careful and accurate manner is a sure way to avoid violations and ensure that system operators are confident about the bacterial quality of the water being served.

In the second article, we described the three types of samples mentioned in the TCR and made a pitch for standardizing the names of these sample types. Using the same sample names at the water system, in the lab, and at the regulatory agency will go a long way toward preventing

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Sampling, from page 1

unnecessary violations or confusion about when to take samples or how many should be taken. To review, standardized sample names are given below:

- ***Routine samples*** are the samples that a system is required to collect on a regular schedule (usually monthly). The number of routine samples required is based on system population, but systems taking fewer than five routine samples are required to take ***extra routine samples***, up to a total of five, in the month following a positive.
- ***Repeat samples*** are the samples that must be taken when a routine sample turns out to be positive. These are located upstream and downstream of the original positive sample and have the purpose of confirming the presence and determining the extent of the contamination.
- ***Special purpose samples***, also commonly called "construction samples," are taken to diagnose the effectiveness of disinfection and flushing undertaken either as a result of an MCL violation, or in response to line repairs, or other activities that have the potential to introduce contamination to the system. These samples do not count toward regulatory compliance.

Alternative names, such as "check samples" or "follow-up samples" should be avoided so that it is always perfectly clear which of the three sample types listed above is actually being collected. Standardizing the names will also make it easier to remember the circumstances that are associated with each type of sample.

Article 3: Why do we collect coliform samples?

To close this series, we will explain why coliform sampling is required, and how it is used to indicate risks to public health.

Staying in compliance with the TCR is really the least important reason for coliform sampling. The real purpose of these samples is to determine whether or not pathogenic (disease-causing) organisms could have entered the water supply.

Coliforms are "indicator organisms" that were chosen to alert us to the possibility of contamination. Although not perfect, the coliform group of bacteria does a fairly good job of meeting the characteristics we want in an indicator organism. Coliforms are used as indicators because of the following characteristics:

- Coliforms are "tougher" than most pathogens—which means that if you do not have coliforms in your water, you probably do not have disease causing organisms either.
- Coliforms can be detected using relatively quick and inexpensive laboratory methods.
- Coliforms are associated with soil, plants, and unsanitary ground water, none of which should be entering a distribution system.
- Detection of coliform bacteria in a public water supply gives the system an early warning that the distribution system has been compromised and alerts us to the potential for pathogenic organisms. This is why every positive coliform sample is tested for the presence of *E. coli.* If this last organism is found, we know that recent contamination of a fecal origin has occurred.
- Contamination by total coliform bacteria is an indication that the water system needs to undertake measures such as disinfection and flushing, but it does not mean that there is an imminent risk to public health.
- Contamination by *E. coli*, however, is a more serious matter and calls for a boil water advisory if confirmed by a second sample that is positive either for total coliform or for *E. coli*.

Public Health Benefits of the Total Coliform Rule:

Implementation of the TCR has resulted in the reduction in risk of illnesses from disease-causing organisms associated with sewage or animal wastes.

Some waterborne pathogenic diseases include typhoid fever, viral and bacterial gastroenteritis, and hepatitis A.

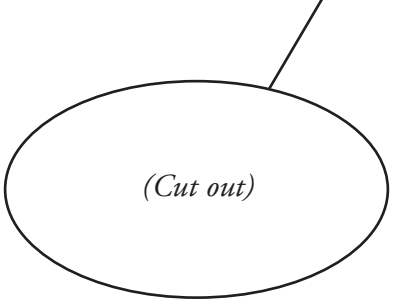
In conclusion, we hope that this series of articles has helped to clarify what types of samples we take under the provisions of the TCR and how they are used both to establish legal compliance and, most importantly, to protect the consuming public from disease-causing organisms.

Resources: Your DEQ or Health District Office will be happy to answer questions you might have about coliform sampling. You can learn more about coliforms and the TCR at the following web site: http://www.epa.gov/safewater/therule.html#Total. ■

Nitrate Public Notification Door Hanger ⟶

When the nitrate maximum contaminant level (MCL) of 10 mg/L is exceeded, this situation becomes a Tier 1 violation. It is at this point that a public water system must notify its customers of the Tier 1 violation within 24 hours.

Door hangers are one method of getting the word out quickly. The sample door hanger (with front and back) on page 3 can be photocopied and used in an emergency. ■



Drinking Water Warning:

Your tap water has high levels of nitrate.

Do not give water to infants under 6-months-old

or use it to make formula or juice for infants.

Nitrate samples collected on _____ show nitrate levels of _____. This is above the nitrate standard, or maximum contaminant level (MCL), of the State standard of 10 milligrams per liter (mg/L).

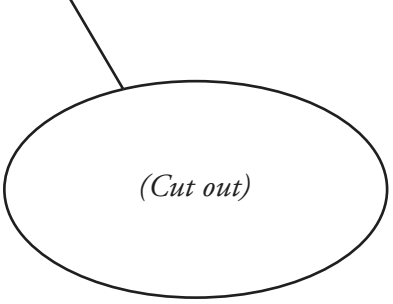
The main health risk is to infants below the age of 6 months, who could become seriously ill and, if untreated, may die. The main symptoms are shortness of breath or blueness of the skin. These symptoms can develop rapidly. Other susceptible individuals include pregnant women and people with certain blood disorders. These individuals should use an alternative source of drinking water until further notice.

To Avoid Possible Illness:

- **DO NOT** give tap water to infants under 6 months of age or use it to make formula or juice.
- **DO NOT** try to treat the water by boiling it. Excessive boiling can make nitrates more concentrated, because nitrates remain behind when the water evaporates.
- **If an infant shows signs of "blue baby syndrome" (bluish skin, difficulty breathing) get medical attention immediately.**
- If you are, or think you may be susceptible to nitrate, consult your doctor or use an alternative source of drinking water.

WARNING WARNING

(Front)



Water System:_____

PWS ID#_____

Contact:_____

Telephone:_____

Date notice distributed:_____

What is being done to correct the problem?

_____

_____

_____

_____

How long will this advisory remain in effect?

This advisory will remain in effect until additional samples show nitrate at acceptable levels. We will notify you when that happens.

For more information on nitrate in drinking water, and what is being done regarding this incident, please contact us at _____.

EPA Safe Drinking Water Hotline

1-800-426-4791

or **www.epa.gov/safewater/hotline/**

Advertencia:

El agua del grifo está contaminada con nitrato.

No se la dé a bebés menores de 6 meses ni la utilice para *preparar fórmula o jugo para bebés.*

Este informe contiene información muy importante sobre su aqua beber. Tradúzcalo o hable con alguien que lo entienda bien.

Para información adicional acerca de los nitratos en el agua potable y lo que se está haciendo con respecto a este incidente, póngase en contacto con nosotros a _____.

(Back)

T R A I N I N G S C H E D U L E

Class/Sponsor	Location/Date
Vulnerability Assessment *(IRWA)*	*Boise, December 13*
SCADA-Water/WW *(BE)*	*Bonners Ferry, December 14*
Vulnerability Assessment *(IRWA)*	*McCall, December 15*
Management/Finanace *(IRWA)*	*Coeur d'Alene, January 10*
Vulnerability Assessment *(IRWA)*	*Coeur d'Alene, January 12*
Vulnerability Assessment *(IRWA)*	*Wendell, January 24*
SWS Sanitary Survey *(BE) - Water*	*Coeur d'Alene, January 24*
WW I & II Certification Review *(BE) - WW*	*Coeur d'Alene, January 25-26*
Management/Finance *(IRWA)*	*Boise, January 26*
VSWS Certification Review *(BE) - Water*	*Nampa, January 31*
Management/Finance *(IRWA)*	*Twin Falls, February 7*
Management/Finance *(IRWA)*	*Hailey, February 9*
Basic Lab Procedures *(IRWA)*	*Orofino, February 15*
Board Training *(IRWA)*	*Moscow, February 23*

For further information, contact the following:

(BE) = Brown Environmental, Inc. *1-800-543-4358 or for the Boise area, 1-208-465-5725.*
Web site: www.idahooperatortraining.com.

(IRWA) = Idaho Rural Water Association, *1-800-962-3257 or 1-208-343-7001.*
Fax: 1-208-343-1866. E-mail: irwa@idahoruralwater.com.
Web site: www.idahoruralwater.com/index2.htm.

Safe Drinking Water Hotline

For general information
on drinking water call:

1-800-426-4791

Monday - Friday, 9*am* - 5*pm* EST
(excluding Federal holidays)
or
contact EPA's
Safe Drinking Water web site at:

www.epa.gov/safewater/hotline/

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